REMARKS/ARGUMENT

Regarding the Claims in General:

Claims 16-21 and 23-31 are remain pending. Claims 16, and 31 have been amended to correct a minor grammatical error, and to address the rejections in the outstanding Office Action by incorporating into each claim, the features of claim 22, which has now been canceled. Claim 23 has been amended to conform to the changes in claim 16, and claims 24 and 25 have been amended to depend on claim 16, instead of canceled claim 22.

Regarding the Prior Art Rejections:

In the outstanding Office Action, (a) claims 16-18, 20, 21, 27, 28, and 31 were rejected under 35 U.S.C. 103 as being unpatentable over Wright U.S. Patent 6,181,033 (Wright) in view of Roth-Stielow et al. U.S. Patent 6,081,086 (Roth-Stielow) and Myers U.S. Patent 4,330,045 (Myers), (b) claim 19 was rejected under 35 U.S.C. 103 as being unpatentable over Wright in view of Roth-Stielow, Myers, and Kinoshita et al. U.S. Patent 5,517,401 (Kinoshita), and (c) claims 22-26 were rejected under 35 U.S.C. 103 as being unpatentable over Wright in view of Roth-Stielow, Myers, and Sohnle U.S. patent 4,059,778 (Sohnle). The rejections of claims 16-21, 27, 28, and 31 are moot in view of the incorporation of the features of claim 22 into claims 16 and 31. With respect to the rejection of claims 22-26, applicants respectfully traverse this rejection.

As pointed out in the specification, an important object of the present invention is to reduce the amount of space occupied by an electrical machine compared to similar prior art devices. This is accomplished by an improved arrangement of essential components of the machine, particularly the braking resistors, which consume substantial space in conventional electrical machine designs.

This feature of the invention is clearly reflected in claims 16 and 31 as amended, each of which recite the following:

> a plurality of braking resistor units arranged in the vicinity of the electrical machine for converting electrical power of the electrical machine into thermal energy when the motor operates in a generator mode to brake the wheel shaft,
>
> the braking resistor units being disposed coaxially with the wheel shaft around the circumference of at least one of the input or the

output of the transmission unit or the wheel shaft in a plane in an annular shape.

These features of the invention are not disclosed, taught, or suggested in any of the cited prior art, whether considered alone or in combination. Wright, for example, does not teach the positioning of a braking resistor assembly in the vicinity of the input or the output shaft. This is acknowledged by the Examiner in the Office Action at page 2, Section 3 (last sentence of first paragraph).

Roth-Stielow does disclose placement of a braking resistor in contact with the motor (col. 2, lines 45-52). However the problem Roth-Stielow seeks to solve, and the manner in which the solution is accomplished is entirely unrelated to the present invention. Specifically, Roth-Stielow is concerned with preventing overheating of a braking resistor. One of the ways this is accomplished is by use of a resistor material which exhibits a *positive* temperature coefficient, allowing the braking resistor to effectively shut itself off if it gets too hot. This solution has nothing to do with the geometric arrangement of the resistor units. With the focus in Roth-Stielow on an entirely different problem from that of the present invention, someone skilled in the art who was aware of Wright would have no reason to take the teachings of Roth-Steilow into account in attempting to solve applicants' problem.

In any case, Roth-Stielow fails to teach the space saving arrangement of braking resistor units in an annular shape around the circumference of the drive shaft. This deficiency is acknowledged by the Examiner as demonstrated by his reliance on Sohnle (see page 4 of the Office Action, Section 5, middle of first paragraph). However, Sohnle is also entirely unrelated to the present invention. Here, the concern is to simplify the wiring arrangement for a rectifier output circuit of a multi-phase alternator, and the solution resides in the specific geometry of the heat sinks used to support the rectifiers, and the placement and wiring pattern of the rectifiers on the heat sinks.

While the resulting rectifier array is disposed coaxially and around the circumference of the alternator drive shaft in a plane in an annular shape, this is totally incidental, and there is no disclosure, teaching or suggestion that this results in a saving of space even in the context of Sohnle's invention. There is certainly no disclosure, teaching or suggestion that this geometry would have applicability to improving the form factor for an electric machine utilizing braking resistors. It can only be by reference to the teachings of the present invention that a person skilled in the art would be inspired to arrange the braking resistors in the manner claimed.

In summary, therefore, there is no legitimate motivation for a person skilled in the art to combine the teachings of the references in a manner which would satisfy the requirements of claims 16 and 31 as amended, and these claims, along with dependent claims 17-21 and 23-30 should be allowed at this time.

In view of the foregoing, it is respectfully submitted that the application is now in condition for allowance, and early notification thereof is respectfully requested.

Respectfully submitted,

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